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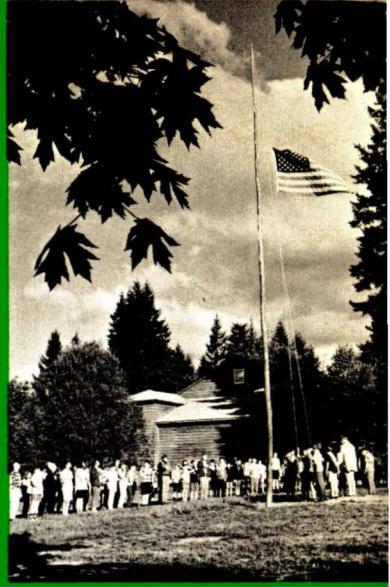
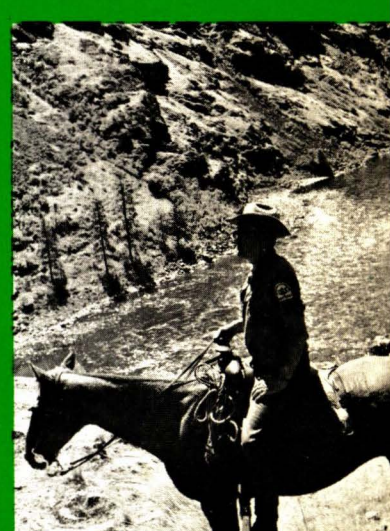
1968

The National Forests

IN THE PACIFIC NORTHWEST 1968





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ROCKY MOUNTAIN STATION

Waldo Lake, in the Oregon Cascades,
Willamette National Forest.

Foreword

This report highlights activities and significant events involving the Forest Service in the Pacific Northwest during 1968.

The year started as though we would have a fire experience even worse than 1967. We were justifiably worried until the rains started in early August. After that, one of our biggest problems was too much water. At year's end, the snow pack exceeded any of recent years.

At the national level, legislation was passed to create a new National Park and adjoining National Recreation Areas in the North Cascades of Washington. The area involved was formerly in the National Forest System. A new Wilderness in the National Forest was created also in the North Cascades. In Oregon, the Congress created the Mt. Jefferson Wilderness.

A new law creating a system of Wild and Scenic Rivers was passed. A portion of the Rogue River was included, with other rivers indicated for study. The National Scenic Trail System was established, with Forest Service responsibilities for the Pacific Crest Trail running from north to south through the entire Northwest.

Demand for forest products continued high with correspondingly high prices for timber. Log export controls were adopted. Public use continues to expand, both winter and summer, and several areas within the National Forests are pressed to meet the demand. An improved road system is aiding in dispersion of visitors, but is far from a total answer to the need.

Plans are at hand to absorb continued future expanded pressure on the National Forests. We hope that facilities adequate to serve planned needs can be provided.

Very sincerely yours,

Chas. A. Connaughton

CHAS. A. CONNAUGHTON
Regional Forester

On the Cover

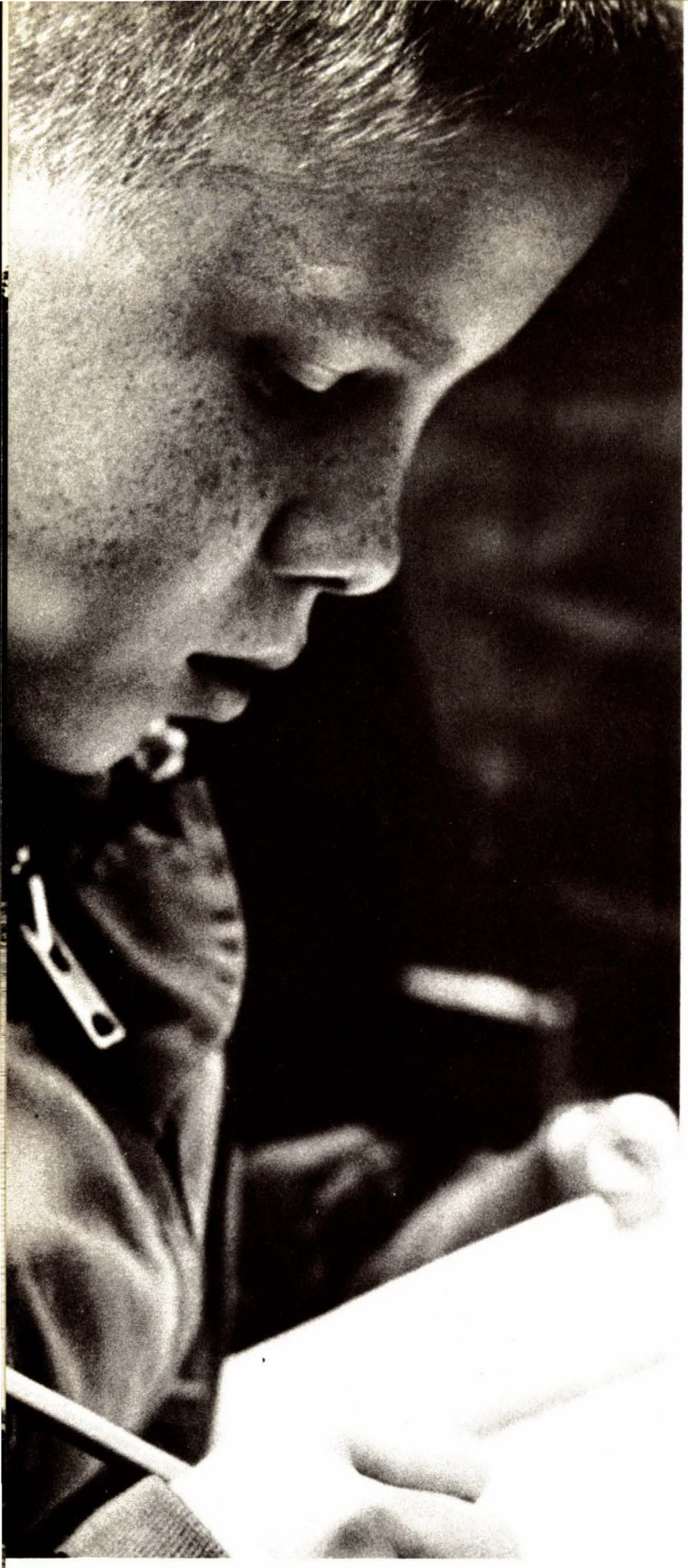
Against a dizzying mountain backdrop, a National Forest recreationist rappels down a cliff in the North Cascades of the State of Washington (large photo).

Small photos, top to bottom:

- Flag lowering ceremony at day's end, Multnomah County, Oregon, Outdoor School.
- Mrs. Lyndon B. Johnson, with Agriculture Secretary Orville Freeman at her left, and Forest Service Chief Edward Cliff, at Tollgate Campground, Mt. Hood National Forest.
- "Horse Ranger" Don Miller in Hells Canyon of the Snake River.
- Silhouettes at McKenzie Pass, Oregon Cascades.

Punch Bowl Falls on Eagle Creek, Mt. Hood National Forest.

All photos by the Forest Service unless otherwise noted.



Avid attention given by John Jenkins to recording an observation in his field notebook is typical of the concentration shown by students in an outdoor school. John is a sixth grader at Lieser Elementary School, Vancouver, Washington.

A Special Report

Conservation Education Seen As Key to Effective Learning

Kathy burst into the classroom with all the exuberance a second grader can command upon making an exciting discovery. "Miss Lewis, Miss Lewis," she shouted. "Our tree has gotton taller. The top unfolded and it's bright and green."

Kathy was describing the living growth of the forest, as viewed by a 7-year-old. Her teacher wanted the class to find out how trees grow, so they set up a simple experiment. They placed a stake beside a small tree on the school yard. They marked the tree's height and waited. Finally something happened, as it does each spring over millions of acres of forest land across the nation.

Why are such basic learning discoveries by Kathy and thousands of children like her in Oregon and Washington so important — to them, to their teachers and parents, to the Forest Service, to other state and federal resource management agencies, and to the public?

Kathy and her classmates could have memorized how a tree grows taller, but until they actually saw the terminal bud swell, burst and elongate, they might never have really understood a vital part of the growth process.

Educators have found that involvement of the learners to "discover" for themselves why something is the way it is, is a key to effective education. The discovery approach is most applicable when the classroom is moved beyond the restrictions of four walls to the natural world, which by its very nature, promotes curiosity and a general desire to learn.

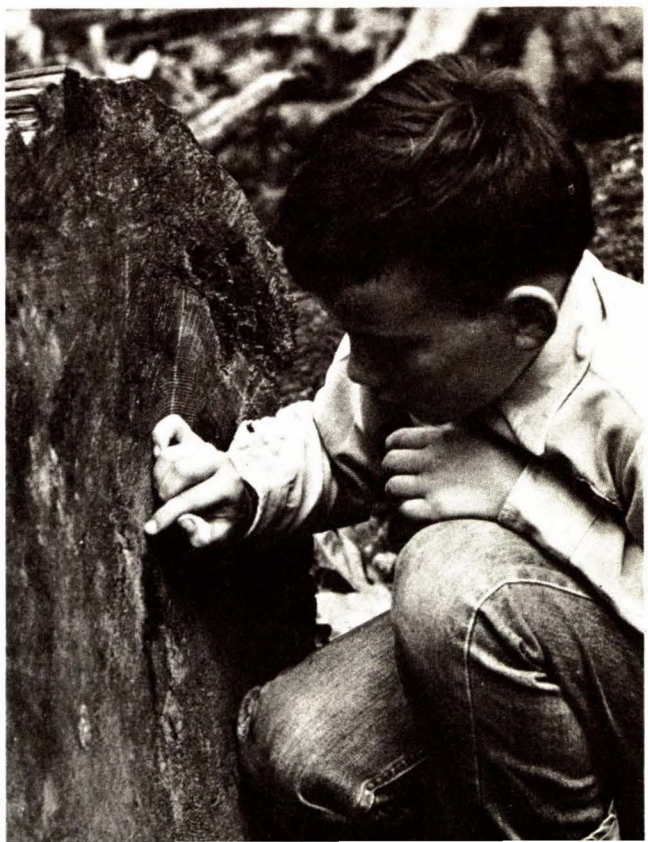
One of the basic premises of conservation education is that today's children someday will help shape decisions involving use and protection of natural resources. An informed and intelligent public, capable of making rational decisions towards the management of the land, must first understand society's dependence upon natural resources. And such understanding comes about

Natural resource agency representatives like Ernest C. McDonald, outdoor education coordinator for the Pacific Northwest Region of the Forest Service, assists in the pilot stages of establishing new outdoor education programs. Here, McDonald teaches children how to use an increment borer to determine the age of a tree.

through effective educational programs — such as that which for Kathy began in kindergarten.

At Kathy's school, the schoolyard itself is a classroom. There's a soil pit where the children gain better understanding of how soil is formed, its productivity, and its importance. Her schoolyard also has an arboretum of native trees and wildlife habitat plantings. Some of the trees predate the school, because planners wisely decided to adapt the school design around the natural environment as much as possible. Why, they asked, scrape the site clean of natural vegetation and then landscape the grounds with the same kind of trees that would be destroyed?

When Kathy reaches the sixth grade she will enjoy another unique outdoor learning and living experience. Her school is in one of the approx-



An outdoor school student counts the annual rings of an old-growth log, and relates the tree's growth to familiar points in the progression of history.

Watched by an attentive audience, Gail Owens, a student counselor, left, explores the adaptations of a crawfish to its environment. Outdoor school staff experience gives student teachers like Miss Owens a valuable insight into how they may use the outdoors to motivate learning.

imately 80 school districts in Oregon and Washington with recurrent Outdoor School programs, involving about 15,000 sixth grade students annually. It's a week-long school away from school, financed and administered by the local school district, and organized with the assistance of the Forest Service and other resource agencies.

Those familiar with the Outdoor School program feel many of the skills and attitudes needed by young people today can be developed best in a natural outdoor environment. One of the most significant benefits to a child attending an outdoor school is the opportunity for direct learning experiences in democratic living and in understanding the importance of the natural environment.

Many school districts are using the sixth grade Outdoor School as a springboard for conservation education at the high school level where programs and courses in conservation, forestry, and outdoor

Working together, these students discover that collecting and identifying aquatic life in a stream is the first step in determining the water quality of that stream.

school student leader training, help young people develop further understanding of how man must learn to live within and manage his total environment according to the laws of Nature.

How did Kathy's school district get so vitally involved in conservation education? First, a group of educators and people whose work or lives are directly associated with natural resources, formed a local Conservation Education Committee to implement outdoor education programs in their schools.

Committee members who manage natural resources assumed the role of assisting educators in developing plans for school yard classrooms, disseminating conservation literature, assisting teachers in developing curriculum materials, and conducting conservation education workshops for teachers.

Teachers such as Miss Lewis at Kathy's school learn in the same manner as their students. One-day workshops are conducted by the Conservation Committee on the school yard, to involve the teachers in the same activities they will be pursuing with their pupils. In addition, teachers like Miss Lewis may attend and receive college credit at one of 20 or more workshops in conservation, held in Oregon and Washington each year. The teacher workshops cover natural resource management, and techniques for investigating and observing the environment.

Colleges and universities are also recognizing the importance of training teachers in conservation education. Southern Oregon College has established a master's degree program in conservation and outdoor education. Oregon College of Education is planning an outdoor education program as part of the total college curriculum. Oregon State University has been conducting pilot outdoor school programs for more than 10 years.

Conservation education is not a separate subject added to the already loaded school day. Rather, it's a logical emphasis and study of natural resources as they relate to geography, history, economics, political science, mathematics, creative arts, and other subjects. Integration of conservation education into the existing curriculum thus becomes a significant step toward more effective and relevant education for the Kathys, and children at all grade levels.

For Kathy, the discovery of how a tree grows is just a beginning.

Small group instruction at outdoor schools provides opportunities for teachers and counselors to work with individual students — a privilege too often denied in crowded indoor classrooms.

Don Cannard, principal of Vancouver's Lieser Elementary School, is typical of modern educators who feel that the key to effective education lies in providing relevant and significant learning experiences for children. In many ways, this type of learning can best be accomplished in the outdoors.

Utilizing a new frontier for outdoor education, a televised course entitled "Observing Our Environment" was produced in 1968-69 for showing over Oregon educational television. Some 100 teachers registered for the course, to receive graduate credit through Southern Oregon College. The course was designed to acquaint teachers with techniques they may use for class investigation of the natural environment. Here, before a television camera, George Otte, soil scientist, and Ernest McDonald, explore reasons for soil differences.

Summer conservation workshops provide many teachers with basic information about natural resources and how they are managed. Cal Giesler, Oregon State Game Commission, displays a freshly captured specimen (above), and asks of his teacher audience — "what's the difference between a toad and a frog?"

Wonderment and appreciation for other living things shows in the eyes of two outdoor school students as they watch an orphaned chipmunk being fed with a medicine dropper.

In a solemn moment as the shadows lengthen, Multnomah County, Oregon, Outdoor School students gaze upward as the Nation's colors are lowered at day's end.

Climaxing a busy day at the Multnomah County Outdoor School, students sit in front of a roaring campfire and sing in accompaniment to a cool banjo strummed by Martin Kuns, a staff instructor who goes by the camp name of "Spike." From such experiences, lifelong memories are formed.

Milestone Conservation Laws Affect Northwest Forests

It will be remembered as a year of milestone conservation legislation focusing national attention on the Pacific Northwest Region of the Forest Service. The 90th Congress in 1968 established the North Cascades National Park in the State of Washington and the Mt. Jefferson Wilderness in Oregon. Also designated were systems of Wild and Scenic Rivers and National Scenic Trails.

Climaxing years of public debate over management of the wildly beautiful land of glacier-clad peaks, the park legislation (PL 90-544) established a 505,000-acre North Cascades National Park, a 107,000-acre Ross Lake National Recreation Area, and a 62,000-acre Lake Chelan National Recreation Area. Like the Park, the new National Recreation Areas will be administered by the National Park Service.

The National Park legislation involves land formerly in the Mt. Baker and Wenatchee National Forests, and the same law gave the Forest Service additional classified Wilderness to manage and protect in the North Cascades. The law established the 518,000-acre Pasayten Wilderness, encompassing the former North Cascade Primitive Area, and also added 12,721 acres to the Glacier Peak Wilderness.

In addition to the Pasayten Wilderness in Washington, Congress passed legislation (PL 90-548) designating the 99,632-acre Mt. Jefferson Wilderness as part of the National Wilderness Preservation System, whose basic concepts were pioneered by the Forest Service more than 40 years ago.

Including most of the former Mt. Jefferson Primitive Area in Oregon's Cascades, the new Mt. Jefferson Wilderness also takes in popular Marion Lake, where existing limited improvements will be phased out to conform with the Wilderness Act.

The Picket Range, a spectacle of jagged rock and ice, in the new North Cascades National Park.

Passing through an old fire scar left by a lightning strike, Conconully District Ranger Bob Snoich, Okanogan National Forest, rides one of the trails awaiting recreationists in the high and wide Pasayten Wilderness. Remmel Mountain appears in the distance. Congress established the 518,000-acre Wilderness, to be managed by the Forest Service, as part of the North Cascades National Park legislation.

Rogue Designated Wild River

An 85-mile stretch of Oregon's famed Rogue River is one of the Nation's eight waterways initially designated in the National Wild and Scenic River System established by Congress in 1968 (PL 90-542). The portion of the Rogue designated as a Wild River extends from the mouth of the Applegate River to the Lobster Creek Bridge, and includes both the placid, and the wildly turbulent whitewater of Rogue fame. The Wild and Scenic River section of the Rogue is to be administered by the Departments of Interior and Agriculture, with the Forest Service and Bureau of Land Management now working toward establishment of the exact boundaries of the special river area, and shaping plans for management and protection.

Also in the Pacific Northwest Region, the Skagit River and its tributaries in the North Cascades of Washington, and the Illinois River in

Tom Wright

Congress designated the new Mt. Jefferson Wilderness in the Oregon Cascades to include Marion Lake. The old Marion Lake Guard Station is among improvements that must be removed to conform with the Wilderness law.

A portion of Oregon's famed Rogue River, including wildly turbulent whitewater such as that challenging this driftboat, is among the Nation's eight rivers initially designated in the National Wild and Scenic River System.

Oregon were named as two of 27 rivers to be studied as potential additions to the Wild and Scenic River System. Studies must be completed and recommendations made to the President and Congress by 1978.

Crest Trail Gains National Attention

Extending some 2,300 miles from Canada to Mexico, the Pacific Crest Trail is one of the two initial components in the National Trails System established by Congress. The law (PL 90-543) designated the Pacific Crest Trail and the Appalachian Trail, and called for 14 other trails to be studied for potential addition, including the Old Oregon Trail and the Lewis and Clark Trail.

Passage of the National Trails legislation adds emphasis to a previously designated 1975 Forest Service target for completing a long range program for construction or re-construction of the Oregon Skyline Trail and Washington's Cascade Crest Trail to ultimate locations and standards.

The Oregon Skyline and Cascade Crest Trails comprise the Pacific Crest Trail route through the

Pacific Northwest, with travel limited to foot or horseback.

Expected to gain increased use because of the national attention, the Pacific Crest National Scenic Trail will be administered by the Secretary of Agriculture (Forest Service) in consultation with the Secretary of Interior. The Act also calls for an advisory council to be appointed by the Agriculture Secretary to assist in planning and determination of policy for development and administration of the trail.

North Cascades Work Proposed

The Forest Service will play a vital role in developing the North Cascades into what is expected to become one of the greatest outdoor recreation complexes in the land.

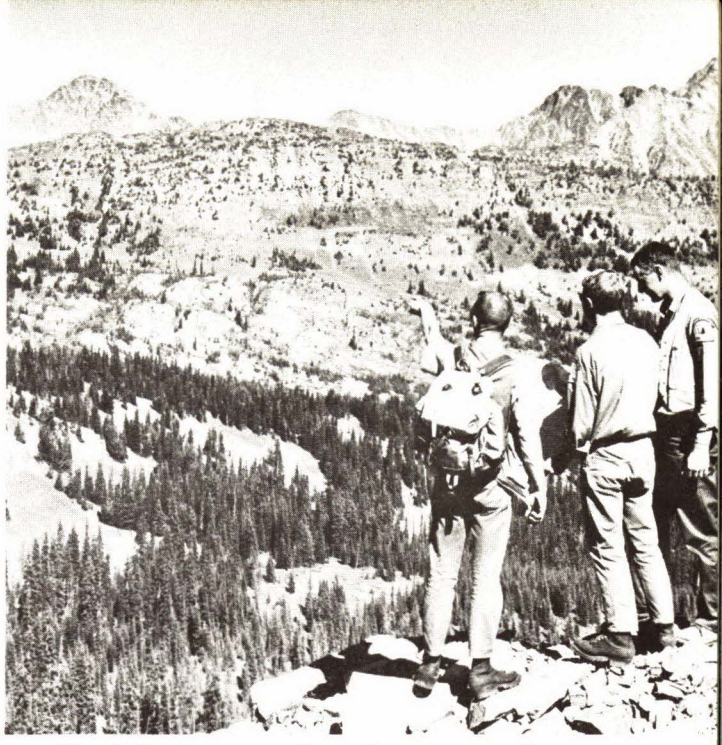
Creation of the new Park, combined with the anticipated opening of the North Cross-State Highway in 1972 or 1973, will mean a greater-than-ever recreational impact on the National Forests of the area. The Forests already are gearing to meet the pressure. A $14.5 million development package is envisioned by National Forest recreation planners for the next five years to provide necessary public improvements and facilities.

The National Park legislation provides that administrative and public service facilities, both within the Park and Recreation Area boundaries, and on adjacent National Forest land, will be developed on a coordinated basis agreed upon by the Secretaries of Interior and Agriculture. The National Park Service and the Forest Service have begun a joint study for the respective Secretaries, with the development plan to be completed by October, 1970.

But the future is now in the North Cascades. The Forest Service is proposing an initial development program, based on preliminary plans correlated with the Park Service, calling for a tentative budget of approximately $4.5 million in fiscal year 1970.

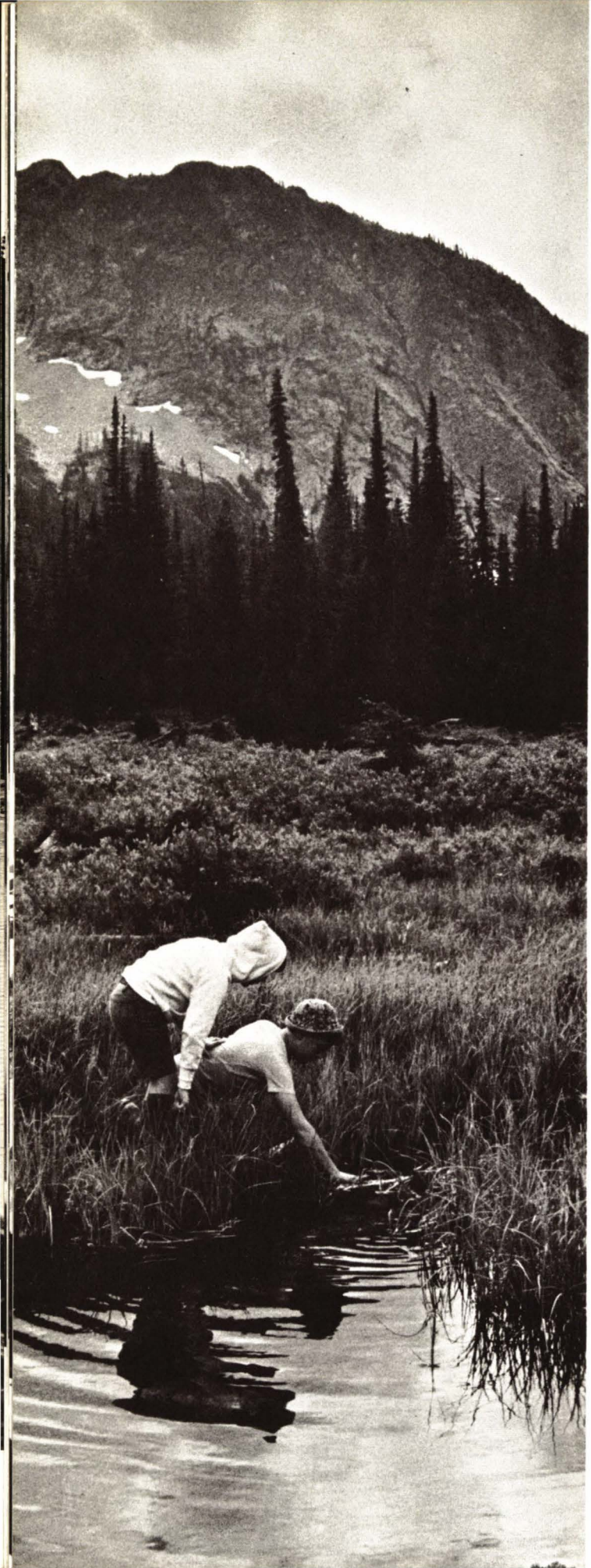
Subject to Congressional approval, the money would be used to plan and construct campgrounds and other visitor facilities on both sides of the Cascade Crest, and for roads, trails and trailheads.

Most of the more pressing needs stem from the progress on the federal-state North Cross-State



Forest Service recreation planners are given a vital role in developing the North Cascades into one of the greatest outdoor recreation areas in the land.

Additional camping facilities at Baker Lake, Mt. Baker National Forest, are included in priority projects deemed necessary to keep pace with recreational demands that will come with completion of the new North Cross-State Highway.



Highway project. Washington Governor Dan Evans, with Senators Warren Magnuson and Henry Jackson, participated in an historic ceremony marking the first official passage of four-wheel drive vehicles through the mountains, near the end of the 1968 working season. The highway, expected to open for public travel by 1972 or 1973, offers a unique opportunity for recreational planning.

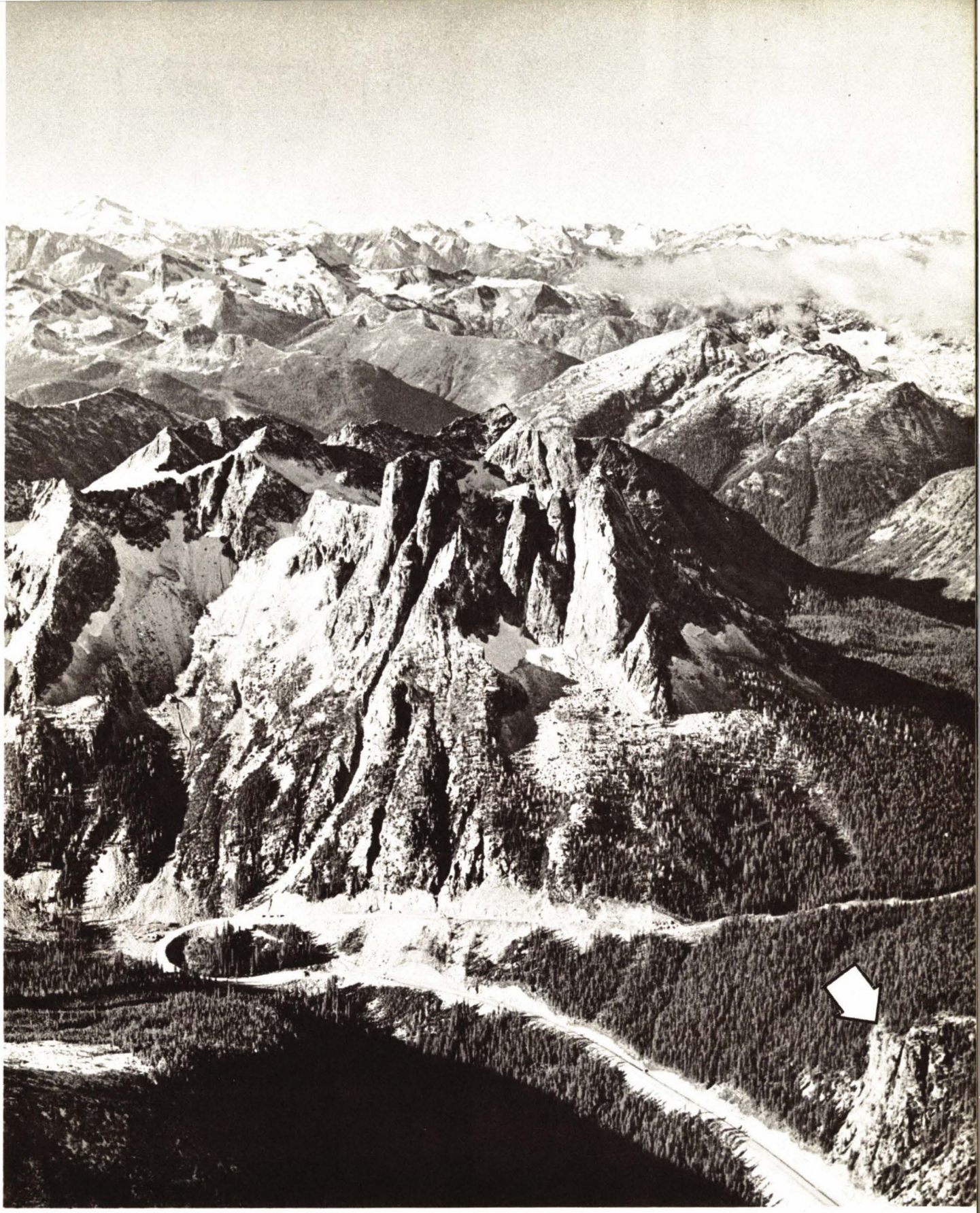
While regular funds available to the Forest Service are being budgeted for development along the highway, they are inadequate to meet the needs. Anticipated visitor impact by 1970 at Washington Pass alone will require extensive parking and picnic facilities, along with a major overlook providing visitor information. A visitor center at Early Winters, in the upper Methow Valley, is envisioned as the "eastern portal" to the North Cascades, serving travelers with information and interpretive services for the entire complex. It is proposed as a joint development with a State of Washington roadside rest area.

Several new campgrounds and expansion of existing campgrounds — with all the related needs such as sanitation and parking — are planned for along the highway. Trailheads and trails also must be planned and constructed, with much of the work to involve the Pacific Crest National Scenic Trail which will intersect the North Cross-State Highway.

Other priority projects, aside from those directly associated with the North Cross-State Highway, include additional camping facilities at Baker Lake on the west, and Lake Chelan on the east. Harts Pass and Suiattle River roads are among routes needing immediate attention to safely carry present traffic. Surveys are scheduled to begin in 1969 to determine feasibility of a "Mt. Baker Loop Highway", to provide an around-Mt. Baker route via Austin Pass.

A map depicting the Forest Service's tentative long range development program for National Forest land adjacent to the National Park and Recreation Areas is on Pages 16-17. How long it will take to implement the developments envisioned depends on money made available, and how fast the need emerges.

The pending completion of the North Cross-State Highway creates an urgent need for parking, sanitation, and other developments to protect fragile beauty spots such as the meadow in Washington Pass.



A visitor overlook station on the cliff indicated in this aerial photo is among developments planned for North Cross-State Highway travelers in the Liberty Bell Mountain-Washington Pass area. Glacier Peak appears on the horizon.

During the First Lady's visit to Timberline Lodge, Mrs. Lyndon B. Johnson and Agriculture Secretary Freeman enjoyed a backpacking demonstration presented by Zigzag District Ranger Dick Buscher, Forester Anne Heisler (substituting for Buscher's wife who was ill), and 10-year-old Lise Buscher.

Timberline Visited by First Lady

Among the millions of Northwest National Forest recreational visitors in 1968 was a gentle lady from Texas. Her abiding interest in beautifying the land will make her long remembered not only as the Nation's First Lady, but First Lady of America the Beautiful. Mrs. Lyndon B. Johnson, wife of the President, enjoyed a picnic lunch in the Tollgate Campground of the Mt. Hood National Forest, and spent a night at internationally known Timberline Lodge high on the shoulder of Oregon's highest peak.

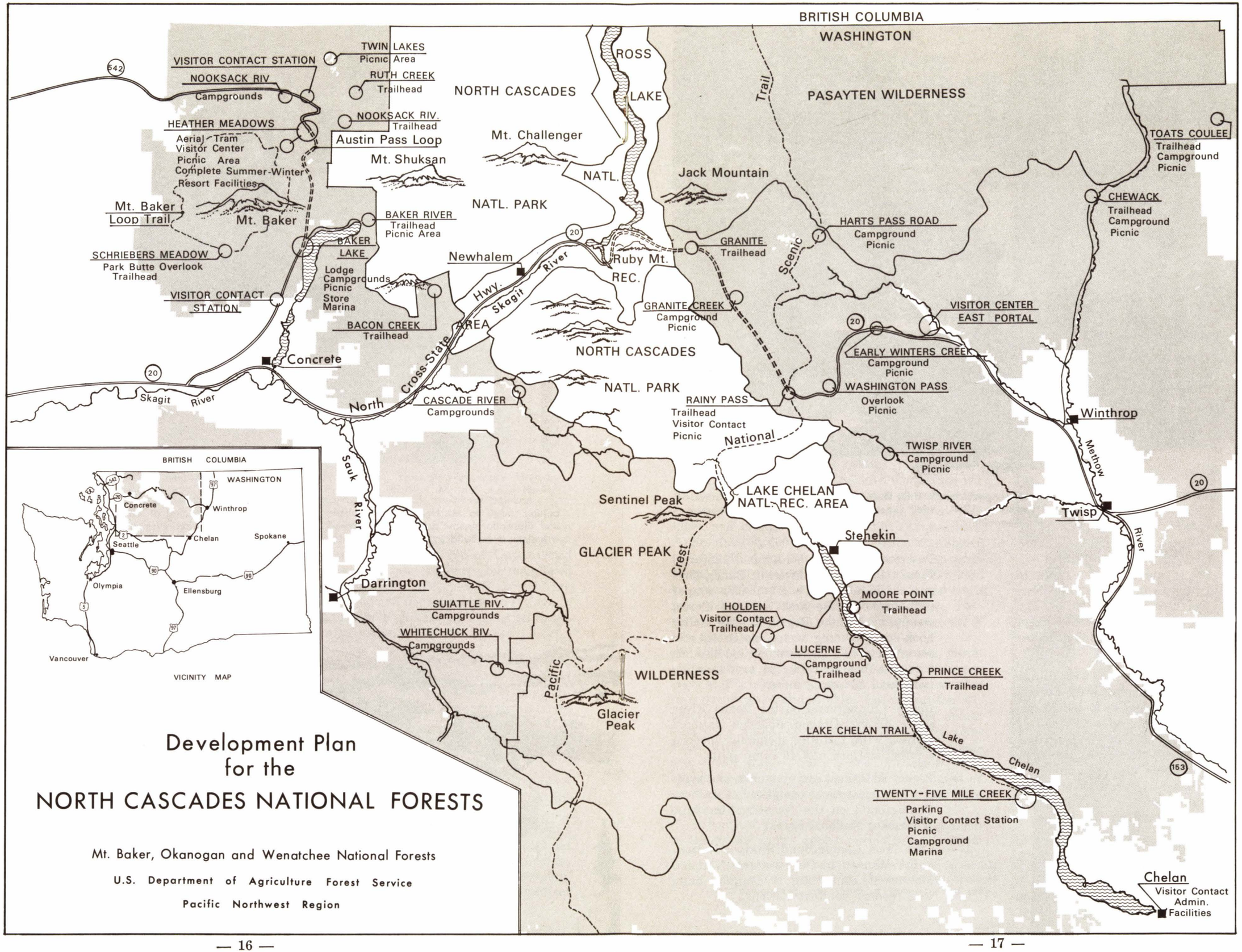
Accompanied on her Mt. Hood visit in early June by Agriculture Secretary Orville L. Freeman and Forest Service Chief Edward P. Cliff, Mrs. Johnson was impressed with picturesque Timberline Lodge. She stated her hope that it would always be maintained and preserved for the enjoyment of the American public.

Timberline was dedicated in 1937 by President Franklin D. Roosevelt, and became a significant part of the Oregon tradition. The project provided an unequalled opportunity for blending the talents of artists and craftsmen idled in the great economic depression of the 1930's. Unparalleled craftsmanship built into the lodge by the skilled artisans, and the alpine setting with its inspiring views of Mt. Hood and the mountains to the south, combined to create a superlative attraction drawing millions of visitors over the years.

But now, after withstanding for more than three decades the screaming blizzards that howl across the face of Mt. Hood, the magnificent wooden structure is facing a very real threat posed by the people themselves. Three-quarters of a million visitors annually are literally wearing out Timberline Lodge!

The Forest Service is proposing a $3 million program to preserve and improve Timberline. Included in the proposal is a new wing for the existing lodge building, a separate day lodge designed to withstand the heavy-booted traffic of skiers, an employee quarters, and a maintenance building, together with grading, parking, and landscaping. Congress will be requested to finance the project by federal appropriation.

Architect renditions show two major components of a $3 million proposal to preserve and improve famed Timberline Lodge on Mt. Hood. Sketch above shows a new wing extending at left from the original Timberline Lodge, and illustration below depicts the proposed new day lodge. Other improvements would include employee quarters, a maintenance building, and parking and landscaping.



Development Plan for the NORTH CASCADES NATIONAL FORESTS

Mt. Baker, Okanogan and Wenatchee National Forests

U.S. Department of Agriculture Forest Service

Pacific Northwest Region

COLLIDING RIVERS
At this point a rare phenomenon oc
North Umpqua and Little River meet
Along these and similar streams, fo
sources are managed to produce a
continuing supply of water for dom
industrial and recreational uses.
UMPQUA
National For

Phenomena of the colliding rivers, where the North Umpqua meets Little River, was among the countless attractions enjoyed by millions of visitors to the National Forests in 1968. Wolf Creek Job Corpsmen built the attractive stone wall for this popular Umpqua National Forest viewpoint.

Visits Increase at Developed Sites

A record was set in numbers of visitors to developed recreational sites in the National Forests of the Pacific Northwest during 1968. Total visits to campgrounds and resorts rose 12 percent to reach an all time high of 19.6 million visitor days.

While the visits to developed sites were on the increase, the overall recreational use of the Forests last year showed a slight decrease in the Northwest. The 27.3 million visitor day total reflected a 2.7 percent drop from 1967's 28.1 million recreational visitor days. Weather was given the blame. A sudden onslaught of bad weather in August shortened the stays of thousands of Forest visitors and apparently accounted for the drop in the recreational visit total.

Several new campgrounds greeted visitors to the Pacific Northwest National Forests in 1968. Among the major developments opened were:

— Union Creek Campground on the Mason Reservoir, Wallowa-Whitman National Forest, 17 miles southwest of Baker, Oregon. Union Creek's 24 trailer-camper units make it the first National Forest campground in the Region to have trailer hook-ups providing water, electricity and sewer services. The campground also has a boat launching ramp, 34 tent camping units, and 80 picnic units.

— Illahee Campground on the Rogue River above Agness, Oregon, Siskiyou National Forest, with facilities including modern comfort stations and 46 camp units.

— Eighty additional camping units and modern comfort stations completed at Kachess Campground on the Kachess Reservoir, Wenatchee National Forest.

— Cave Creek Campground, Siskiyou National Forest, near the Oregon Caves National Monument, containing 19 camping units with modern comfort stations.

Also during 1968, Oregon Governor Tom McCall dedicated Jubilee Lake on the Umatilla National Forest. The man-made lake was a joint project of the State Game Department and the Forest Service. Developments will include boat launching facilities, modern comfort stations, and about 72 camp and picnic units.

Looking ahead to 1969, an area destined to become one of Oregon's finest outdoor playgrounds will invite the public. A newly completed road will be opened to Waldo Lake in the Oregon Cascades. The 10-mile-long lake has extensive new campground developments on its eastern shoreline, while the western shoreline and backcountry surrounding the lake will be managed as a roadless recreation area.

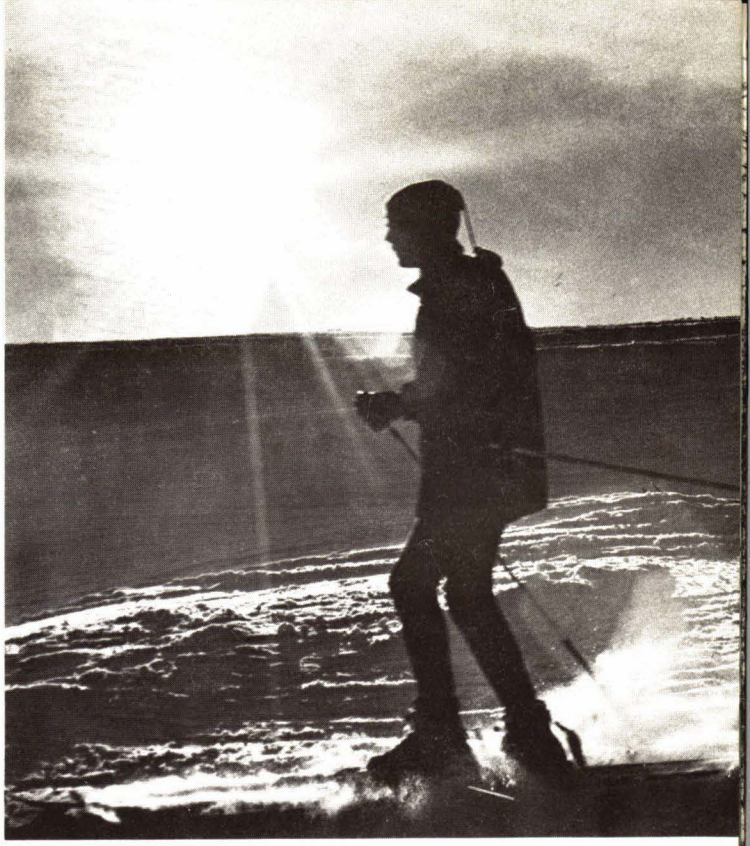
Winter Sports Boom on New Tangent

In the Northwest, a new facet of the winter sports boom came to the forefront during the 1967-68 snow season. Thousands of persons ventured out over snow-covered roads and trails, touring by ski, snowshoe and dog sled — but mostly by snowmobile. An estimated 66,200 snowmobilers visited the National Forests in Oregon and Washington during the 1967-68 season, and the use could easily double during the current season.

To keep pace with the massive wintertime visitation to the Forests, a number of safe cross-country routes were established and signed with black and orange snowmobile silhouette markers. Approximately 600 miles of snow trails were signed and identified for cross-country travel. An additional 2,800 miles of roads and trails were used by snowmobilers and 100 miles of roads and trails were designated specifically for ski touring. Brochures were printed as public guides for several of the routes.

At most ski areas on National Forests, meanwhile, rain or lack of snow during critical periods such as Christmas and spring vacations resulted in a downward trend of skier use during the '67-68 winter sports season. The 31 winter sports sites drew a total of 1.4 million skier visits, compared with 1.6 million visits for the previous season. Some sites — those blessed with snow while others were not — enjoyed twice the amount of use they had in the previous season, but these were in the minority.

In contrast to 1967-68, there was high optimism as the '68-69 winter sports period began. Snow



Silhouetted by a late afternoon sunburst, a skier starts a run at one of the 31 developed winter sports sites on the National Forests of the Pacific Northwest.

Attempting to keep pace with the ever-increasing popularity of snowmobiles, National Forest personnel are designating safe routes of travel for the snowmobilers.

Three visitors to McKenzie Pass add their silhouettes to the stark outline of a long dead tree in the lava fields. McKenzie Pass is in the heart of a 1.7 million acre Oregon Cascades area for which management guidelines were published by the Forest Service into a single document transcending Forest boundaries.

came early and deep, and there was every indication for a banner year. New improvements included day lodges at Warner Canyon and Hoodoo Ski Bowl in Oregon and additional chairlifts at Mt. Baker and Stevens Pass in Washington.

Availability of a potential new winter sports site, Skyline Basin, was announced by the Umatilla National Forest. The site, located 22 miles southeast of Dayton, Washington, in the Blue Mountains, would require an estimated $1 million in private capital for the development under a special use permit. Two chairlifts, three surface tows, a day lodge, and other necessary facilities would be included.

Oregon Cascades Management Focused

Shaped by fiery volcanic violence through the aeons of time, the Oregon Cascades are a dramatic and beautiful land. For more than half a century, most of the area embracing the Cascade Crest from the Columbia River, almost to the California border, has been within the National Forests.

Land use patterns and management policies affecting the Oregon Cascades have been steadily evolving over the years. Forest Service experience in the area was climaxed in late 1968 with the focusing of management guidelines for the Oregon Cascades into a single document, for the first time. The publication transcends National Forest boundaries to coordinate Forest Service management for the entire area. It is a response to public interest and desire to review management direction affecting some 1.7 million acres classified for Wilderness and primary recreation use.

Also in response to keen public interest in the Oregon Cascades, the Forest Service produced a slide show featuring dissolve projection, wide screen image, and a synchronized sound track. Entitled "Land Born of Fire", the show depicts the beauty of the Oregon Cascades, along with the Forest Service's deep and long lasting involvement with the land and the people who use the land. The production has been viewed by an estimated 10,000 persons, not counting two showings by a Portland television station.

Key Recreation Land Secured

The Pacific Northwest's early coastal settlers knew it for a fact — when the tide was out, their table was set. Contemporary campers on Washington's Olympic Peninsula are making the same discovery at Seal Rock Campground.

The popular Olympic National Forest camping spot along Hood Canal includes what are probably the only productive oyster beds in the entire National Forest system.

As part of a Forest Service program to secure key recreational properties, an additional 660 feet of Hood Canal waterfront was purchased in 1968 and will be managed along with other Seal Rock Beach. This provides approximately one-half mile of tidelands where recreationists can gather their own oysters and dig clams.

The purchase was financed from the Land and Water Conservation fund which is supported in part by fees charged for campground use. It was a significant addition in the continual program designed to meet present and future recreational needs through acquisition of key highway frontage, waterfront, scenic areas, and other lands with a high recreation potential.

Thirteen tracts totalling 1,068 acres of prime recreation lands were purchased in 1968 under the Land and Water program. The properties, in addition to the Olympic tidelands, include:

— On the Wallowa-Whitman National Forest, a two-mile stretch along the Imnaha

River, part of the ranch owned by the late motion picture actor, Eugene Pallette.

— On the Siskiyou National Forest, frontage along the Rogue River.

— On the Snoqualmie National Forest, Alpine Falls and frontage along the Tye River and Stevens Pass Highway.

— On the Siuslaw National Forest, frontage on Sutton Creek.

— On the Gifford Pinchot and Mt. Hood National Forests, key property for additional recreation development in the Columbia River Gorge.

Another significant recreation property acquisition involved the California Pacific Corporation donation of 141 acres at Olive Lake on the Umatilla National Forest. The acreage was all that remained of private lands intermingled with National Forest lands at the popular recreation lake.

Six land exchanges were completed in 1968, involving more than 16,000 acres. Additions were made to the Gifford Pinchot National Forest Lava Caves Recreation Area. In exchange, the City of Seattle received more of the city's watershed lands from the Snoqualmie National Forest. Other exchanges consolidated National Forest and private lands into more manageable units. Thirteen exchange cases involving some 33,500 acres were in final stages at year's end.

Sanitation Project to "Save" Lake Gem

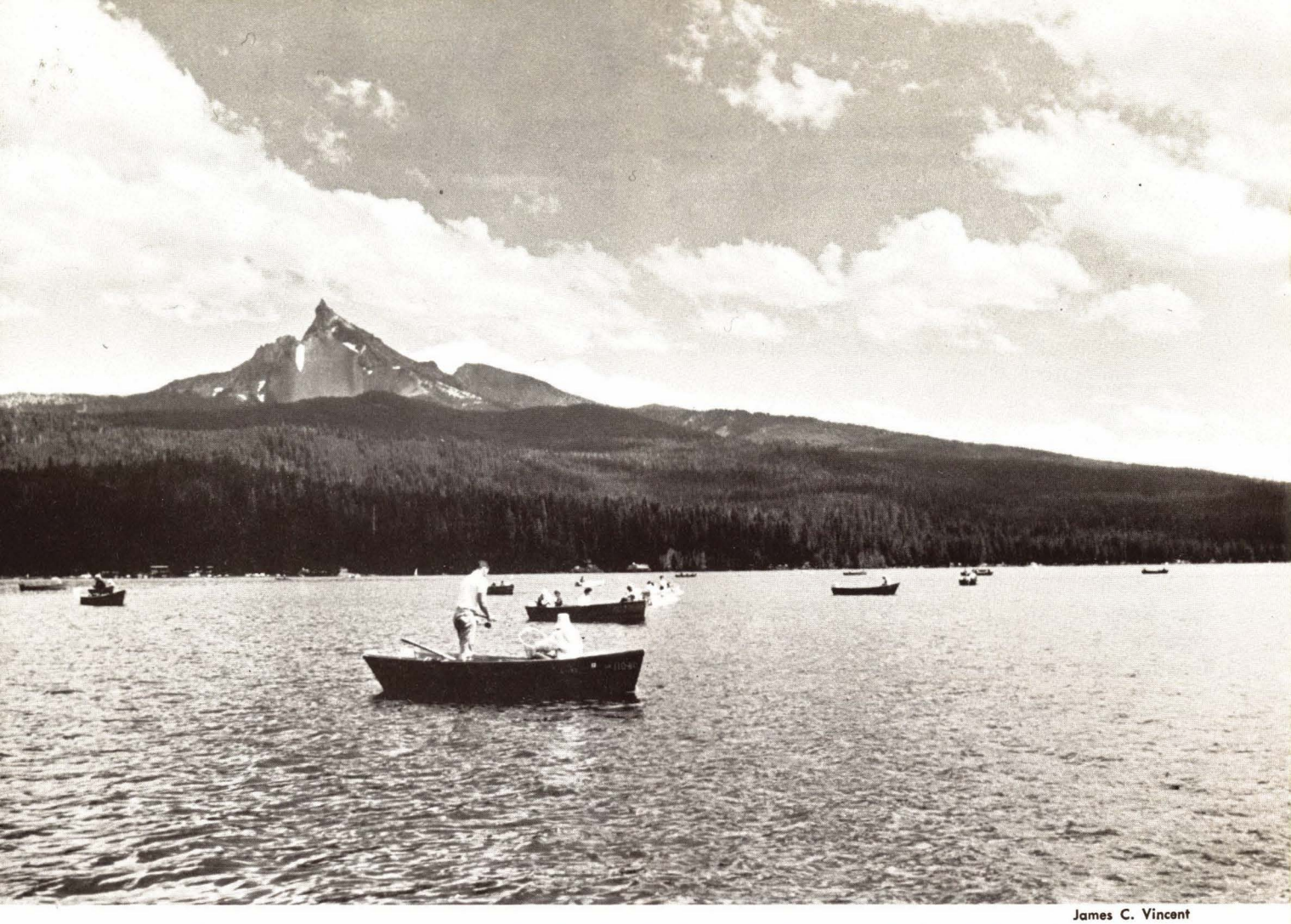
When a population equaling a small city is concentrated into a forest and water setting, the resulting environmental impacts can be severe.

Take Diamond Lake, for instance. For years, the beautiful Umpqua National Forest lake near the foot of Mt. Thielsen has been one of the heaviest used fishing and camping spots in the Pacific Northwest. But the very popularity of Diamond Lake also contained the threat of its destruction.

It became apparent that relatively primitive and limited water and sanitation services were rapidly becoming inadequate to handle the pressure of ever-increasing recreational use. A consulting engineer retained by the Forest Service to study the Diamond Lake problem painted a grim picture of one of the gems of the Oregon Cascades becoming "a green-soupy water mass of growth", if the dumping of pollutants into the lake could not be halted.

To prevent Diamond Lake from becoming an

Camp Fire Girls try their hand at prying oysters from the rocks at Seal Rock Beach, where the Olympic National Forest meets the salt water of Hood Canal. Below, Darce Goode, of Dallas, Texas, prepares to down an oyster, as Penny Knapp, Los Angeles, watches with giggled apprehension. The visitors were in a Camp Fire Travelcade touring the Olympic Peninsula to learn about natural resource management.



James C. Vincent

The biggest sanitation project ever undertaken by the Forest Service in the Pacific Northwest is intended to save the fisherman's paradise of Diamond Lake from ruination.

extreme health hazard, and its ultimate destruction by pollution, the Forest Service embarked on a $1.5 million water and sewer system project — by far the largest project of its kind ever undertaken on National Forests in the Pacific Northwest Region.

Work began in 1968, and is scheduled for completion in 1971. Designed to serve the needs of a city the size of Bend or Roseburg, the project will put an end to discharge of pollutants into the lake from Forest Service campgrounds and permittee facilities along the east and south shores of the lake. It is also designed to handle planned expansion of recreation facilities.

The big project will include: approximately six miles each of water lines and sewer lines, 10 underground sewage pumping stations, a five cell lagoon system totaling approximately 25 acres, two 200,000 gallon water storage tanks, and two deep-well turbine pump stations for water supply. Twenty comfort stations, two shower buildings, seven fish cleaning stations, and a combination comfort station building with a standby generator are also planned.

Elsewhere in the Region, 21 sanitation projects were completed, including a sewage treatment plant at Cape Perpetua on the Oregon Coast. A sewage plant to serve the Wolf Creek Civilian Conservation Corps Center on the Umpqua National Forest was expected to be completed in the spring of 1969.

Timber Harvest Near Record

Loggers operating on the National Forests of the Pacific Northwest had their second biggest year in history during 1968. Timber harvest totalled 5.3 billion board feet, almost equaling the 5.4 billion board feet record cut of 1965.

The 5.3 billion board feet harvested in 1968 had a value of $174.4 million, compared with 4.6 billion board feet harvested in 1967 at a value of $118.2 million.

National Forest Timber Cut and Sold

		Volume, Board Feet	Value
Harvested	1968	5,313,429,000	$174,493,581
	1967	4,669,610,000	$118,240,713
Sold	1968	4,765,569,000	$197,143,781
	1967	4,429,625,000	$122,571,352

Amount of timber sold in 1968 also reflected an increase. A total of 4.7 billion board feet was sold, for a value of $197.1 million, compared with 4.4 billion board feet sold in 1967 for a value of $122.5 million. Increases in cutting and timber value during the year were attributed mainly to an extremely strong market for most forest products.

Except for certain salvage and thinning sales, the total volume offered for sale in any one year is controlled by the Region 6 sustained-yield allowable cut, which was 4.347 billion board feet during 1968. Harvest figures are averaged out over a period of years and include some material not included in allowable cut calculations. Consequently, the higher harvest figure for 1968 does not violate the sustained-yield principle.

Log Exports Restricted

Special action was taken by the Government in 1968 to prevent excessive export of unprocessed National Forest timber. In April, Secretary of Agriculture Freeman determined that export controls were needed in Western Oregon and Western Washington to help protect purchasers dependent upon National Forest timber. As a result, most National Forest timber sold during 1968 after the Secretary's decision was destined to receive primary manufacture by domestic forest product firms.

Later in 1968, an amendment to the foreign aid bill by Senator Wayne Morse required domestic processing of all but 350 million board feet of timber sold each year on Federal lands west of the 100th meridian. Secretary Freeman and Secretary of the Interior Stewart L. Udall agreed that allocation of the 350 million exemption would be 275 million board feet for the National Forests of the Pacific Northwest Region, 60 million board feet for the Bureau of Land Management, and 15 million for the California Region of the Forest Service.

Young Douglas-fir thrive in an old timber harvest area on the Willamette National Forest.

Douglas-Fir Study in Final Stages

A long range study into the Douglas-fir region's timber supply situation had reached final phases at the end of 1968. The study, begun in 1966, examined the effects that various intensities of National Forest timber management, road construction, and harvest rotation, would have upon timber supplies in the Northwest.

Reforestation and Thinning

Reforestation was accomplished on 70,000 acres of Region 6 National Forest land in the 1967-68 season. Artificial seeding was carried out on 11,800 acres, while 58,200 acres were planted with 20 million seedlings. Most of the seedlings, 16.9 million, were produced at Forest Service nurseries at Wind River, Washington, and Bend, Oregon, and the remainder came from the State of Oregon's Elkton Nursery, and the L. T. (Mike) Webster Nursery operated by the Washington State Department of Natural Resources.

Pre-commercial thinning was accomplished on 55,670 acres, while brush competition was reduced on 17,000 acres, and 5,300 acres underwent site preparation for reforestation.

Tree Killers at Large

Douglas-fir beetles were the most serious forest insect threat in the Pacific Northwest during 1968, killing an estimated one billion board feet of timber on 255,000 acres of private, state, and federal forest land in Western Oregon and Western Washington.

The small beetles, which kill trees by burrowing beneath the bark and cutting the sap stream, bred in epidemic numbers after winter storms of 1964-65 and dry summers of 1966 and 1967 had weakened the trees.

Most of the beetle-caused mortality occurred on the Gifford Pinchot, Mt. Baker, Rogue River, Umpqua, and Siskiyou National Forests. Plans were made to salvage much of the beetle-killed timber before another flight of the insects in the spring of 1969.

With bark beetles the most damaging, a total of nearly 3 million acres of timber in Oregon and Washington were found by the annual aerial survey to be insect-infested.

East of the Cascades, the mountain pine beetle in lodgepole pine, and the western pine beetle in ponderosa pine caused significant tree mortality. An infestation of larch casebearer, in Eastern Washington was spreading westward and southward towards Oregon. Additional parasitic wasps were released in hopes of biologically controlling the casebearer outbreak. A large infestation of pine needle miner also occurred in lodgepole and ponderosa pine stands on the Deschutes and Winema National Forests.

Fortunately, no new infestations of the European pine shoot moth were detected in 1968. In cooperation with the states of Oregon and Washington, the Forest Service tried various control methods in the vicinity of Hermiston, Oregon, and the Pasco-Kennewick-Walla Walla area in Southeast Washington.

Other insect control work included a pilot spray project using a low volume carbamate insecticide against the western hemlock looper on the Mt. Baker National Forest. The test was unsatisfactory, and other insecticides may be field tested in 1969 against the looper.

Forest disease control work in 1968 included 10,000 acres of silvicultural treatment for dwarf mistletoe. Research continued toward finding effective controls for dwarf mistletoe and root rots which together cause the greatest forest losses to disease. Cooperative efforts with the Bureau of Land Management to develop blister rust-resistant sugar and Western white pines were encouraging and were being continued.

Transportation System Improved

Improvements valued at $61.9 million were accomplished during 1968 on the transportation system of roads and trails in the National Forests of the Pacific Northwest Region. A total of 2,290 miles of road was constructed or reconstructed, mostly by timber sale purchasers as part of their contract. They accounted for 2,082 miles of the total, while the Forest Service built 208 miles. Twenty-four forest road bridges were constructed. Trail work involved 158 miles of construction or reconstruction, along with 11 trail bridges.

Counties Receive Record Sum

Oregon and Washington counties with National Forest lands received a record $31.4 million as their share of receipts from National Forest earnings in fiscal year 1968. The payments represented 25 percent of the receipts from all resources and uses of the National Forests, including timber harvest, grazing, minerals, recreation, power, and other land use.

Thirty Oregon counties received $22,554,295,

A black-tailed fawn nestles against a log in an old timber harvest area.

compared with $18,806,579 in 1967, while 27 Washington counties received $8,854,522, compared with $7,516,284 in the previous year. Since 1906, Oregon counties have received $225 million, and Washington counties, $95 million. Shares are proportioned according to National Forest acreage, with the counties using the money for public roads and schools.

Cooperative Forestry Strides Made

Through cooperative forestry programs, the Forest Service continued to play an important role in aiding forest management efforts on nonfederal lands in Oregon and Washington.

Farm foresters, whose work is financed jointly by the states and the Forest Service, served more than 4,000 small woodland owners, controlling 257,000 acres, in the two states. A total of 34 million board feet of timber and 3,350 cords of pulpwood were harvested, for a gross return of $2.2 million to the owners.

The Forest Service provided cooperative financial assistance for the planting of 65,621 acres of state and private forest land, and seeding of 70,492 acres.

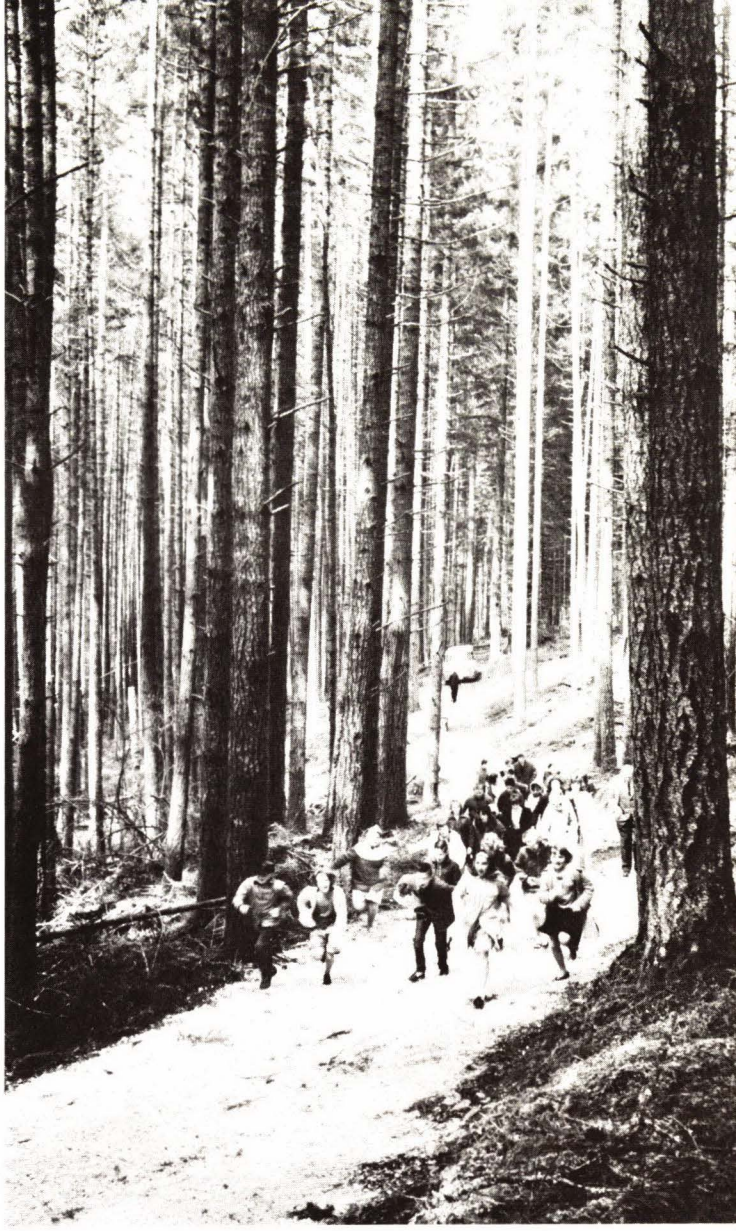
The Forest Service, through the Clarke-McNary Act, also financially assists the states in protecting more than 25 million acres of private and state forest lands against fire. Oregon's State Forestry Department in 1968 held 824 fires to 13,056 acres, while the Washington Department of Natural Resources held 779 fires to 3,883 acres.

Job Corps Accomplishments Noted

Civilian Conservation Centers (Job Corps) are concerned with human resources and natural resources. The four Centers operated on National Forests of the Pacific Northwest Region recorded significant achievements in both categories in 1968.

Young men with poverty backgrounds are assigned to the Centers where they are offered a new chance for work, basic education, vocational training, and social experience. Opened in 1965, the Region's Centers are Wolf Creek on the Umpqua National Forest; Angell, Siuslaw National Forest; Timber Lake, Mt. Hood National Forest, and Cispus, Gifford Pinchot National Forest.

At Timber Lake, a new pilot program in vocational training was launched in mid-1968, in cooperation with the United Brotherhood of Carpenters and Joiners of America. The Union contracted with the Center to teach Corpsmen the basic skills necessary to enter carpentry apprenticeship. Sixty Job Corpsmen were enrolled in the Timber Lake training program. The Union also assists in placing the carpentry trainees on construction jobs after they leave Timber Lake.



Private forests often serve as lands for learning. Here, energetic sixth graders scurry toward the next station during a conservation education field day at the Ed Haase tree farm near Napavine, Washington.

During 1968, Corpsmen from all four Centers recorded 3,101 man-months of work to accomplish conservation projects having a total value of $909,468. The work included development of new campgrounds and picnic areas with a capacity of 500 persons. Corpsmen also worked 762 man-months on improvement of existing campground facilities.

Other conservation work included construction

Vocational courses offered Job Corpsmen at Civilian Conservation Centers include welding and carpentry training. Welding trainees practice with a cutting torch at the Cispus Center, above, while future carpenters are shown at work, below, at Timber Lake.

of 12.5 miles of forest roads and trails, and reconstruction of 24 miles; reforestation and timber stand improvement on 416 acres; construction of a fish ladder and development of fish habitat and fish passageways, and stream stabilization work. Corpsmen also made significant contributions toward adding facilities at the Centers, including completion of a three-bedroom residence at Wolf Creek.

Although the 1968 fire season was relatively short, Corpsmen spent 56 man-months on firefighting, while fire hazard reduction was accomplished on 100 acres.

Fire Acreage Exceeds '67 Mark

Forest and range fires on lands protected by the Forest Service in the Pacific Northwest blackened a total of 41,401 acres in 1968, substantially exceeding the 29,221 acres burned in the 1967 summer of fire. Most of the 1968 loss, however, resulted from just one fire shortly before a drastic change of weather ended a growing fire threat.

Region 6 firefighters battled a total of 1,710 fires, with 1,051 started by lightning, and 659 man-caused. The number of lightning-caused fires was 21 percent above average, while man-caused fires were about average. One National Forest, the Malheur, had lightning storms on 26 out of 46 days during July and the first half of August, resulting in 204 fires.

But it was a human-caused fire which became the biggest of the year in the Region. Starting near Lake Chelan in Central Washington on August 4, the Fourth of July Mountain Fire burned a total of 27,120 acres before being brought under control on August 11 within a 50-mile perimeter. Located on Wenatchee and Okanogan National Forest protection area, the fire caused an estimated loss of $1.5 million, including $550,000 in suppression costs alone. Thirty million board feet of timber was burned, for a loss of $600,000, and damage to orchards, buildings, and other private property was estimated at $400,000. Some 1,300 men were assigned to the fire at its peak.

The onset of widespread heavy rain on August 13 ended a period of fire danger buildup of warm and dry weather which began back in the early spring over much of the Northwest. New records for August rainfall were set at most places west of the Cascades, and at a substantial number of points east of the Cascades.

Although the season was abbreviated, fire sup-

The crown fire has spent its fury, and skeletal limbs glow with incandescent brilliance in a macabre night scene during the Fourth of July Mountain fire in Central Washington.

pression men relied heavily on aircraft and airborne firefighters. Smokejumpers made 1,221 jumps to control or assist in the control of 334 fires in the Region. Airplanes flew 9,775 hours on fire work, and helicopters were used 1,922 hours. Fire bombers dropped 1.06 million gallons of fire retardant chemicals on 258 fires.

Burned Area Restoration Starts

As the fires of 1968 were quelled, work began on rehabilitation of the burned areas. A task force representing a number of land management specialties worked with the National Forests that sustained extensive fire losses. Among these were the Deschutes, Ochoco and Wenatchee National Forests. More than $60,000 was invested in seed and fertilizer to establish a soil protecting plant cover to preserve soil and water values.

In addition, through efforts of a number of agencies, an emergency flood prevention program

A young Forest Service fire suppression crewman hurls a well-aimed shovel full of dirt at a hot spot threatening newly constructed fire line, during the battle against the Fourth of July Mountain Fire.

Harold A. Laney

A flagman signals to a Forest Service aircraft spreading fast-germinating seed over the ruins of the Fourth of July Mountain burn.

For Wenatchee Boy Scout volunteers, Entiat District Ranger Bob Benson demonstrates planting of bitterbrush seed to help restore wildlife habitat in the wake of fire.

was developed under the Flood Control Act of 1950. More than $100,000 was received to carry out emergency work by the Forest Service, Soil Conservation Service, and other cooperators, on the Fourth of July Mountain burn, which included parts of the Okanogan and Wenatchee National Forests, as well as other lands. Other federal, state, county, and private groups contributed additional funds to prevent floods arising from within the burned area. Cooperative work included runoff control on roads and trails, channel clearing and sediment control measures such as the seeding of rapid germinating plants.

Wildlife Areas Re-seeded

When large areas burn, wildlife suffer. Concern isn't limited just to the animals who perish in the flames. Those who survive to forage for food in the devastated areas face "slim pickings" until new growth is established.

Oregon and Washington Game Departments cooperated with the Forest Service in efforts to re-establish wildlife foods promptly on several of the major 1968 burns. Fifty acres of key game range was hand-seeded with bitterbrush. Valuable wildlife food species were also added to erosion control seeding mixtures applied aerially over thousands of acres of burn areas.

Bitterbrush hand-seeding work on Ardenvoir and Fourth of July Mountain burns in Central Washington was given a big boost when members of Wenatchee Boy Scout Troops 83, 33, and 16, donated several days to the project.

Wildlife habitat improvement work over the National Forests of the Pacific Northwest Region in 1968 involved a total of 11,453 acres seeded or planted with forage; forage plant release on 478 acres; 1,493 acres placed under protective fencing; 410 acres of wildlife openings; 148 wildlife water development projects; 108 stream channel improvements; 118 rods of fish spawning bed improvement; 908 rods of channel stabilization, and fish barriers removed at 58 locations.

Concern Shown for Unique Wildlife

Forest Service concern for rare and potentially endangered wildlife was reflected in two separate instances during 1968. On the Deschutes National Forest, management proposals were drafted to protect an osprey habitat. Further south, a Winema National Forest timber sale was postponed indefinitely because of possible conflict with a nesting habitat of the rare greater sandhill crane.

An unusual set of circumstances combined over the years to create, at Crane Prairie Reservoir, one of the most productive breeding habitats in the United States for the osprey, a large bird of prey from the hawk family.

Initial flooding of the reservoir in 1922 killed standing trees and left an extensive ghost forest of lodgepole pine snags. Although esthetically displeasing to some, the snags serve as a nesting and roosting site for the osprey, and surrounding waters offer a productive food source. A 1968 survey showed 27 nests occupied, and total osprey population was estimated at 80 birds.

Recently, decay and wind have begun to take a toll of standing snags. A potential need for controlling trash fish to promote better trout fishing also poses a threat to the food source of osprey. With these problems eminent, the Deschutes National Forest began developing a cooperative interagency management plan to perpetuate the unique species. The plan proposes such management practices as erecting treated poles for nesting sites to replace fallen snags, guying of other nest snags, and providing for a continued source of food. A public information program will also be launched to reduce molestation and indiscriminate shooting.

In the Klamath Falls area, meanwhile, naturalists became concerned for the fate of a pair of nesting sandhill cranes in the vicinity of a proposed Forest Service road for a timber sale. The Winema National Forest supervisor postponed the timber sale and requested special study by ornithology experts. Findings of the study team, composed of representatives from Oregon State University, the Oregon State Game Commission, and the Fish and Wildlife Service, were given to the Forest Supervisor for evaluation before making any final decision on the road location.

Grazing Trend Continues

Grazing on the National Forests of the Pacific Northwest in 1968 continued a trend toward more cattle and fewer sheep. Compared with 1967, cattle numbers increased by 3,415 head, while sheep declined by 6,878 head.

A total of 212,571 sheep and cattle and their offspring grazed on the National Forests and the Crooked River National Grassland in 1968. The livestock were owned by 1,147 ranchers who paid $280,914 in grazing fees. Some 6.6 million acres of National Forest lands were utilized, along with more than 900,000 acres of associated private

William L. Van Allen

An osprey swoops in for a graceful landing in a snag-top nest at Crane Prairie Reservoir, Deschutes National Forest. Management plans call for saving the nesting snags, below, and effecting other habitat protection measures.

Ending another grazing season, black Angus cattle are rounded up in Sparks Lake Meadow near the foot of the South Sister, Deschutes National Forest.

lands intermingled or adjacent to National Forests, allowing stockmen to make optimum use of all lands.

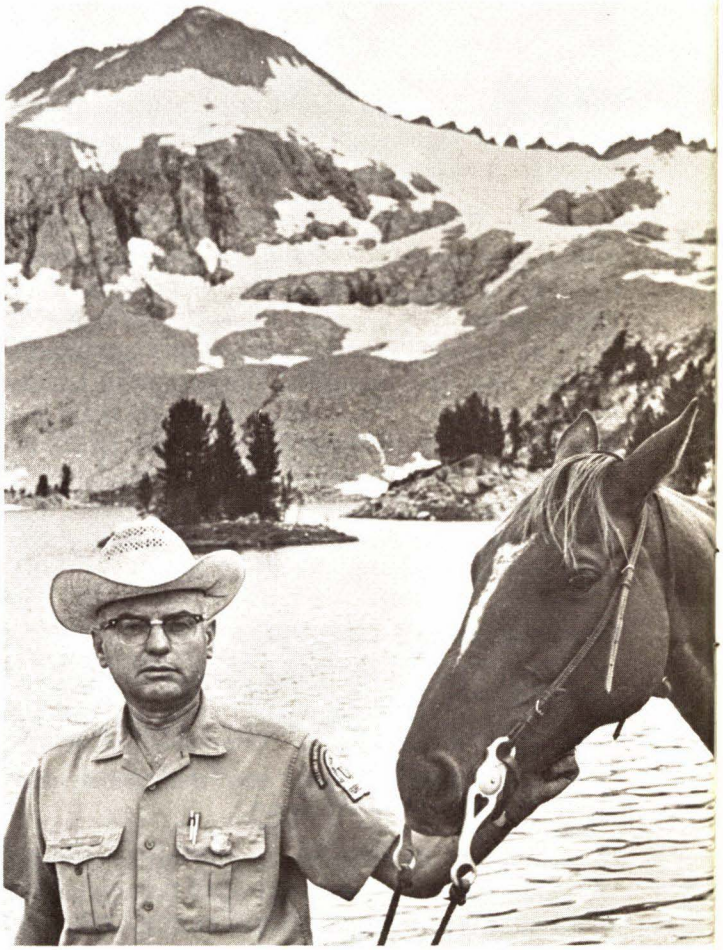
Improvement of rangelands continued to be a cooperative effort involving the stockmen and the Forest Service. Permittees contributed $112,942 in funds and labor, while the Forest Service invested $179,820. Accomplishments included 21,688 acres of range seeding; 7,154 acres treated for control of brush and noxious weeds; 1,640 acres of water spreading projects; 161 miles of fence construction; 64 cattle guards installed; 106 springs developed; 218 ponds and reservoirs constructed; and 40.4 miles of stock driveways improved.

Long-term results from such work in previous years are already beginning to show in increased grazing capacities.

Horsemen Urged to Use Care

District Ranger Don Miller is one of the Forest Service's "horse rangers" who must still rely on horsepower of the four-footed variety to do a big part of their job.

Miller is responsible for the Joseph Ranger District, a 326,700-acre portion of the Wallowa-Whitman National Forest. The Joseph District is a land of breathtaking extremes, and it's horse country — for the men who must manage and protect it, and for many of the recreationists who visit it. The Joseph includes America's deepest



James C. Vincent

Joseph District Ranger Don Miller and friend, at Glacier Lake in the Eagle Cap Wilderness, Wallowa-Whitman National Forest.

gorge — the Hells Canyon of the Snake River — and the Eagle Cap Wilderness in the high Wallowas.

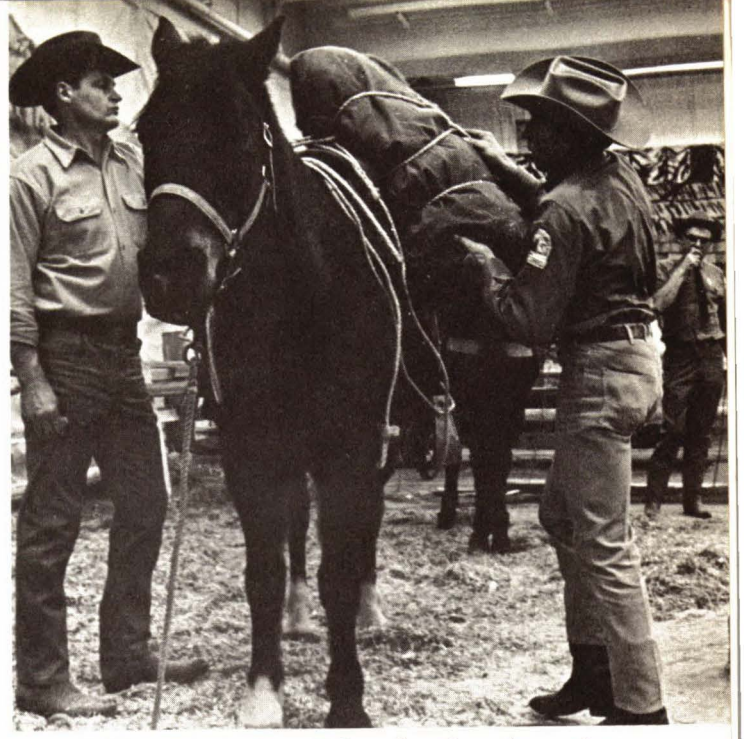
While Miller knows from professional experience the pleasures of horse travel in the back country, he also knows from first hand observation of the environmental impacts caused by growing numbers of horse-using recreationists. Last year, an estimated 35,000 horses and mules were used in Northwest National Forests as recreational pack and riding stock.

Scars made by man and beast heal slowly, if at all, in fragile high elevation country where soils are thin, plant cover is easily disturbed, and trees and forage are limited. Miller too often finds campsites strewn with garbage, water fouled by manure, soil made barren by overgrazing and hoof compaction and trails eroded by switchback cutting.

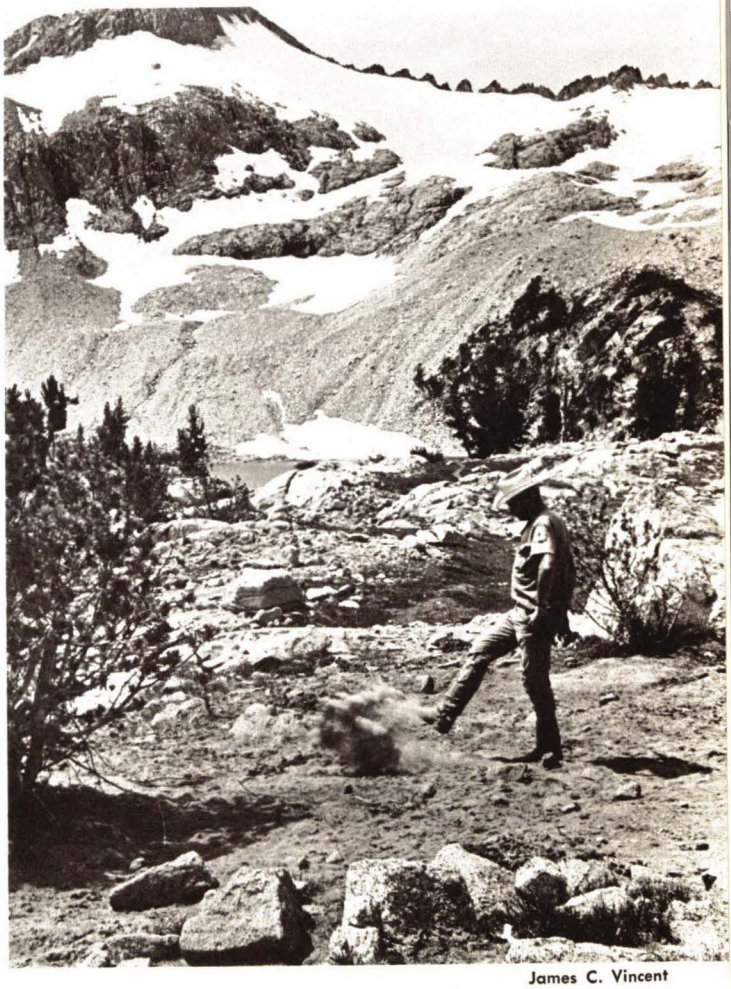
Miller knows many of the problems of back country horse use are caused by people who are unaware of the impact they are creating. With this in mind, he accepted a unique invitation — present a horse packing demonstration at a major metropolitan attraction, and at the same time, inform people on proper use of horses in the wilderness.

The event was the big Boat and Sports Show which annually attracts thousands to Portland's Memorial Coliseum. Miller, together with Forest Service packer Fred Talbott, and a mutual outdoorsman friend, Ken Warren, were among the hits of the 1968 and '69 editions of the show.

Using live animals, the three demonstrated the care of horses and mules and how to pack them for wilderness trips. And most important, Ranger Don Miller had an unequalled opportunity to let horsemen know what they can do to prevent leaving back country scars that may never heal — at least in their lifetimes.



While Ranger Don Miller describes the action for a Portland Coliseum audience, Forest Service Packer Fred Talbott, right, and Ken Warren demonstrate the proper packing of a horse for a wilderness trip.



Ranger Don Miller figures that if recreation stock users can be made more aware of their back country responsibilities, there will be fewer instances of abused campsites such as this one in the Eagle Cap Wilderness.

James C. Vincent

Liberty Bell Mountain,
from Washington Pass.

The Regional Staff

Charles A. Connaughton
Regional Forester

Alfred E. Spaulding
Deputy Regional Forester

Assistant Regional Foresters:

Kenneth O. Wilson
Fire Control

Jack H. Wood
Information & Education

Douglas R. Leisz
Lands & Minerals

Marvin L. Smith
Operation

Dan E. Bulfer
Personnel Management

John S. Forsman
Range, Wildlife Management

Philip L. Heaton
Recreation

Edward H. Marshall
State and Private Forestry

C. Glen Jorgensen
Timber Management

Thomas B. Glazebrook
Watershed Management

Ward W. Gano
Regional Engineer

Reed H. Jensen
Regional Fiscal Agent

The Regional Office
is located in the
Multnomah Building
319 SW Pine Street
Portland, Oregon

Mailing address:
P O Box 3623
Portland, Oregon 97208

Pacific Northwest Region (R-6)
Divisions and Forests

National Forests	Supervisors
Deschutes Bend, Oregon	Ashley A. Poust
Fremont Lakeview, Oregon	Carl W. Simpson
Gifford Pinchot Vancouver, Washington	Ross W. Williams
Malheur John Day, Oregon	Albert G. Oard
Mt. Baker Bellingham, Washington	Harold C. Chriswell
Mt. Hood Portland, Oregon	Lloyd G. Gillmor
Ochoco Prineville, Oregon	Leslie J. Sullivan
Okanogan Okanogan, Washington	Don R. Campbell
Olympic Olympia, Washington	Wynne M. Maule
Rogue River Medford, Oregon	Harvey M. Seeley
Siskiyou Grants Pass, Oregon	William P. Ronayne
Siuslaw Corvallis, Oregon	Spencer T. Moore
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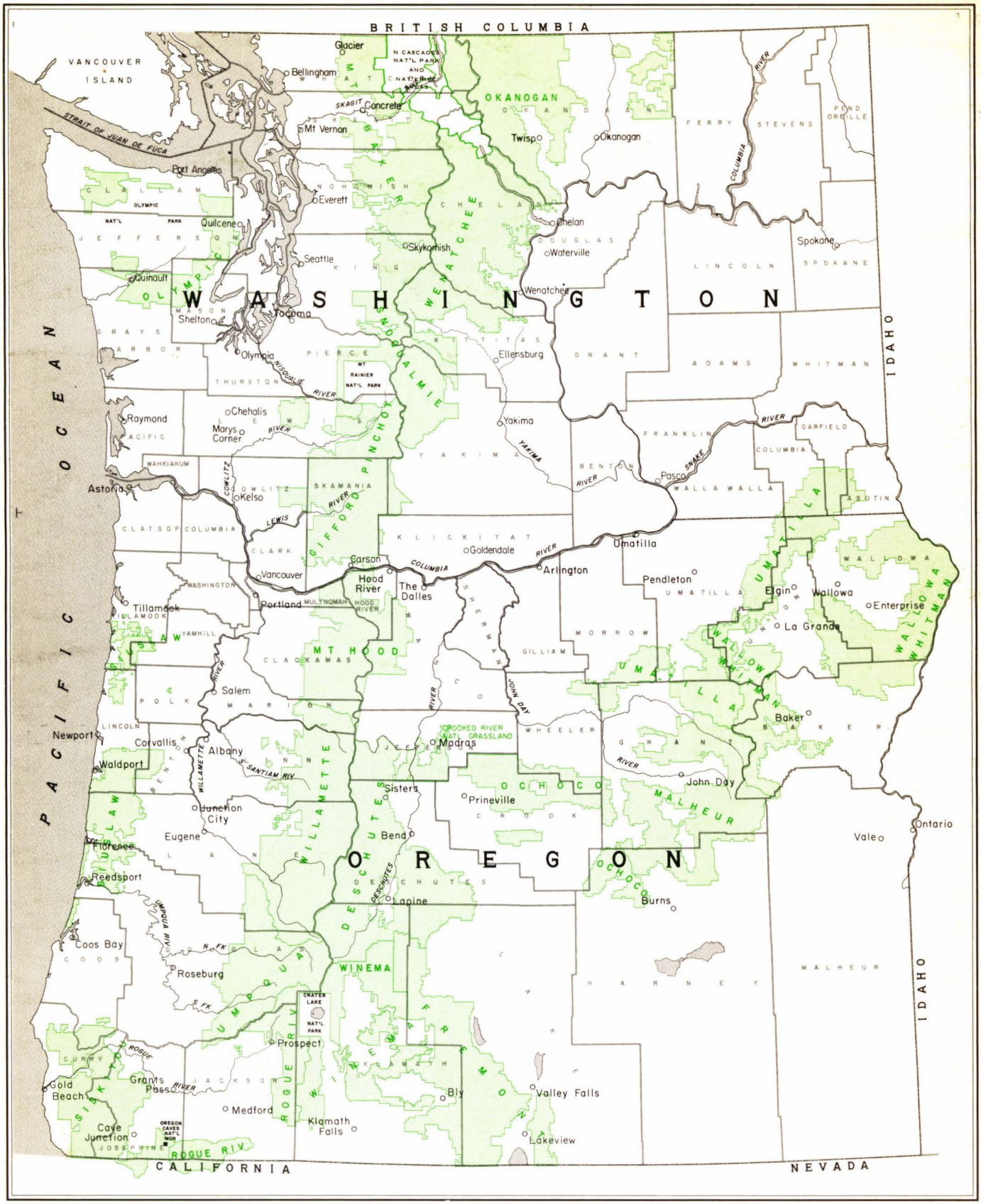
Umatilla Pendleton, Oregon	Wright T. Mallery
Umpqua Roseburg, Oregon	John R. Philbrick
Wallowa-Whitman Baker, Oregon	John L. Rogers
Wenatchee Wenatchee, Washington	Andrew C. Wright
Willamette Eugene, Oregon	David R. Gibney
Winema Klamath Falls, Oregon	Herbert B. Rudolph

North Cascades skyline at dusk.

The Forest Service of the U. S. Department of Agriculture is dedicated to the principle of multiple use management of the Nation's forest resources for sustained yields of wood, water, forage, wildlife, and recreation. Through forestry research, cooperation with States and private forest owners, and management of the National Forests and National Grasslands, it strives — as directed by Congress — to provide increasingly greater service to a growing Nation.



U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
EDWARD P. CLIFF, CHIEF

NATIONAL FORESTS
OF THE
PACIFIC NORTHWEST REGION

U.S.F.S. R-6

GPO 995-462

LEGEND

- STATE LINES
- COUNTY LINES
- NATIONAL FORESTS